Listing of Claims

Please amend claim 126, and
add new claims 139 and 140, as follows:

1-67. (cancelled)

68. (previously presented) An implantable ocular drug delivery device comprising:

a non linear shaped body member having a proximal end and a distal end, the body member comprising a tube provided in a coil or zig-zag shape along its entire length from its proximal end to its distal end, and that is implanted within a patient eye to deliver a drug substance to the patient eye via the body member; and

a cap element at the proximal end of the body member sized to provide a cross-section larger than the cross-section of the coil or zig-zag shape, wherein the body member is positioned within the vitreous fluid and the cap element abuts an incision through which the device is inserted to stabilize the device once implanted, wherein the device is insertable through an incision approximately the same size as the outer diameter of the tube forming the body member.

69. (previously presented) The device of claim 68 wherein the device body member comprises at least three deviations from a linear path.

70. (previously presented) The device of claim 68 wherein the device body member comprises at least four deviations from a linear path.

71. (previously presented) The device of claim 68 wherein the device body member comprises at least five deviations from a linear path.

72. (previously presented) The device of claim 68 wherein the device body member comprises a helical shape.

73. (previously presented) The device of claim 68 wherein the device body member comprises a substantially Z-shape.

74. (previously presented) The device of claim 68 wherein the cap element is in contact with a patient eye outer surface while the body member is inserted into the eye.

75. (canceled)

76. (previously presented) The device of claim 68 wherein the device comprises a therapeutic agent for delivery to the patient during use of the device.

77. (previously presented) The device of claim 68 wherein the device body member comprises a polymer.

78. (previously presented) The device of claim 68 wherein the device body member comprises a polymer that comprises a therapeutic substance to be delivered to the patient eye.

79. (previously presented) An implantable ocular drug delivery device comprising:

a coil-shaped body member comprising a tube wound into a coil shape that is implanted within a patient eye to deliver a drug substance to the patient eye via the body member; and

a cap element sized to provide a cross-section larger than the cross-section of the coil-shaped body member, wherein the body member is positioned within the vitreous fluid and the cap element abuts an incision through which the device is inserted to stabilize the device once implanted, wherein the device is insertable through an incision approximately the same size as the outer diameter of the tube forming the body member.

80. (previously presented) The device of claim 79 wherein the device comprises a therapeutic agent for delivery to the patient during use of the device.

81. (previously presented) The device of claim 79 wherein the device body member comprises a polymer.

82. (previously presented) The device of claim 79 wherein the device body member comprises a polymer that comprises a therapeutic substance to be delivered to the patient.

83. (previously presented) A method for treating a patient comprising:

(a) providing a delivery device comprising a non-linear shaped body member comprising a tube provided in a coil or zig-zag shape, the body member having a proximal end and a distal end, and a cap element at the proximal end, the cap element sized to provide a cross-section larger than the cross-section of the coil or zig-zag shape;

(b) inserting the device into a patient's eye through an incision, the incision being approximately the same size as the outer diameter of the tube forming the body member, whereby the body member resides in the vitreous fluid of the patient's eye and the cap element remains outside the incision through which the device is inserted and abuts the outer surface of the eye to stabilize the device; and

(c) allowing a therapeutic substance to be administered to the patient via the body member.

84. (previously presented) The method of claim 83 wherein the device body member comprises at least three deviations from a linear path.

85. (previously presented) The method of claim 83 wherein the device body member comprises at least four deviations from a linear path.

86. (previously presented) The method of claim 83 wherein the device body member comprises at least five deviations from a linear path.

87. (previously presented) The method of claim 83 wherein the device body member comprises a helical shape.

88. (previously presented) The method of claim 83 wherein the device body member comprises a substantially Z-shape.

89. (previously presented) The method of claim 83 wherein the substance administered to the patient is chosen from one or more of an antibiotic, an antifungal, an antiviral, an antibacterial, an antiallergenic, an anti-inflammatory, a decongestant, a miotic or anti-cholinesterase, a mydriatic, a sympathomimetic, an antineoplastic, a hormonal agent, a beta adrenergic blocker, a growth factor, a carbonic anhydrase inhibitor, an angiogenesis inhibitor, a prostaglandin or an antiprostaglandin.

90. (previously presented) The method of claim 83 wherein the device body member comprises a polymer.

91. (previously presented) The method of claim 83 wherein the device body member comprises a polymer that comprises a therapeutic substance to be delivered to the patient.

92. (previously presented) The method of claim 83 wherein the device comprises a shape memory material.

93. (previously presented) A method for treating a patient comprising:

(a) providing a drug delivery device comprising a coil-shaped body member and a cap element sized to provide a cross-section larger than the cross-section of the coil-shaped body member;

(b) inserting into a patient eye the device whereby the coil-shaped body member is placed in the vitreous fluid of the patient eye and the cap element remains outside the eye and abuts the incision, wherein the device is inserted through an incision smaller than the cross-section of the coil-shaped body member; and

(c) allowing a substance to be delivered by the device to the patient.

94. (previously presented) The method of claim 93 wherein the substance delivered to the patient eye is chosen from one or more of an antibiotic, an antifungal, an antiviral, an antibacterial, an antiallergenic, an anti-inflammatory, a decongestant, a miotic or anti-cholinesterase, a mydriatic, a sympathomimetic, an antineoplastic, a hormonal agent, a beta adrenergic blocker, a growth factor, a carbonic anhydrase inhibitor, an angiogenesis inhibitor, a prostaglandin or an antiprostaglandin.

95. (previously presented) The method of claim 93 wherein the device body member comprises a polymer.

96. (previously presented) The method of claim 93 wherein the device body member comprises a polymer that comprises a therapeutic substance to be delivered to the patient eye.

97. (previously presented) The method of claim 93 wherein the device comprises a cap element that is in contact with the patient eye outer surface while the body member is inserted into the eye.

98. (previously presented) The method of claim 93 wherein the device comprises a shape memory material.

99. (previously presented) A method for treating a patient comprising:

(a) providing a drug delivery device comprising a non-linear shaped body member having a coil or zig-zag shape, and a cap element sized to provide a cross-section larger than the coil or zig-zag shape;

(b) inserting into a patient eye the device whereby the body member resides in the vitreous fluid of the patient eye and the cap element remains outside the eye and abuts the incision, wherein the incision is smaller than the cross-section of the coil or zig-zag shaped body member; and

(c) administering a substance to the patient via the body member.

100. (previously presented) The method of claim 99 wherein the device body member comprises at least three deviations from a linear path.

101. (previously presented) The method of claim 99 wherein the device body member comprises at least four deviations from a linear path.

102. (previously presented) The method of claim 99 wherein the device body member comprises at least five deviations from a linear path.

103. (previously presented) The method of claim 99 wherein the device body member comprises a helical shape.

104. (previously presented) The method of claim 99 wherein the device body member comprises a substantially Z-shape.

105. (previously presented) The method of claim 104 wherein the substance administered to the patient eye is chosen from one or more of an antibiotic, an antifungal, an antiviral, an antibacterial, antiallergenic, an anti-inflammatory, a decongestant, a miotic or anti- cholinesterase, a mydriatic, a sympathomimetic, an antineoplastic, a hormonal agent, a beta adrenergic blocker, a growth factor, a carbonic anhydrase inhibitor, an angiogenesis inhibitor, a prostaglandin or an antiprostaglandin.

106. (previously presented) The method of claim 99 wherein the device body member comprises a polymer.

107. (previously presented) The method of claim 99 wherein the device body member comprises a polymer that comprises a therapeutic substance to be delivered to the patient eye.

108. (previously presented) The method of claim 99 wherein the device is inserted until the cap element is in contact with the outer surface of the patient eye.

109. (previously presented) The method of claim 83, 93, or 99 wherein the device is inserted by twisting or screwing the device into the eye.

110. (previously presented) The method of claim 99 wherein the device comprises a shape memory material.

111. (previously presented) An implantable ocular drug delivery device comprising:

a) a coil-shaped body member that is implanted within the vitreous fluid of a patient eye during use of the device to deliver a drug substance to the patient eye, the body member comprising a tube wound into a coil shape;

b) a cap element sized to provide a cross-section larger than the cross-section of the coil-shaped body member, wherein the cap element is in contact with the patient eye outer surface while the body member is inserted within the eye; wherein the device is insertable within the eye through an incision approximately the same size as the outer diameter of the tube forming the body member.

112. (previously presented) The device of claim 111 wherein the device comprises a therapeutic agent for delivery to the patient eye during use of the device.

113. (previously presented) The device of claim 111 wherein the cap element mates the body member at a proximal end of the device.

114. (previously presented) The device of claim 111 wherein the device body member comprises a polymer.

115. (previously presented) The device of claim 111 wherein the device body member comprises a polymer that comprises a therapeutic substance to be delivered to the patient eye.

116. (previously presented) An implantable ocular drug delivery device comprising:

a non-linear shaped body member that has a coil or zig-zag shape and that is implanted within a patient eye during use of the device to deliver a drug substance to the patient eye via the body member; and

a cap element sized to provide a cross-section larger than the cross-section of the coil or zig-zag shape, the cap element configured to be in contact with the patient eye outer surface while the body member is inserted to the eye;

wherein the device is implantable within the vitreous fluid of a patient eye through an incision smaller than the cross-section of the coil or zig-zag shaped body member.

117. (previously presented) The method of claim 83, 93, or 99, wherein the incision comprises a sclerotomy.

118. (previously presented) The method of claim 83, 93, or 99, wherein the device is implanted in a minimally invasive surgical procedure.

119. (previously presented) The method of claim 83, 93, or 99, wherein the device is implanted at the pars plana.

120. (canceled)

121. (canceled)

122. (previously presented) The device of claim 68, 79, 111, or 116, wherein at least a portion of the body member comprises a biodegradable polymer.

123. (previously presented) The device of claim 122, wherein the biodegradable polymer contains microparticles of the drug substance, wherein as the polymer degrades, the drug substance is released.

124. (previously presented) The device of claim 122, wherein the biodegradable polymer is selected from polyesters of molecular weight of 4,000 to 100,000, homopolymers and copolymers of polylactic acid and polyglycolic acid, polycaprolactone, homopolymers and copolymers of polyanhydrides, homopolymers and copolymers of dicarboxylic acids, polymeric fatty acid dimer compounds, poly(alky-2-cyanoacrylate), poly(hexyl-2-cyanoacrylate), collagen (gelatin), polyacetals, divinyloxyalkylenes, polydihydropyrans, polyphosphazenes, homopolymers and copolymers of amino acids, polydioxinones, polyalkylcyano acetates, polysaccharides and their derivatives, and cellulose and hydroxymethyl cellulose.

125. (previously presented) The device of claim 122, wherein the biodegradable polymer comprises one or more of terephthalic acid anhydride, bis(p-anhydride), poly(p-carboxyphenoxy) alkyl, sebacic acid, adipic acid, oxalic acid, phthalic acid, maleic acid, polydodecanedioic acid polyorthoesters, copolymers of leucine and methyl glutamate, dextran, or cyclodextran.

126. (currently amended) The device of claim 68, 79, 111, or 116, [,]wherein at least a portion of the device comprises a material that is permeable or semi-permeable to the drug substance.

127. (previously presented) The device of claim 126, wherein the portion of the device that comprises a permeable or semi-permeable material represents a percentage of the overall body member material, and wherein the percentage of body member material composed of permeable or semi-permeable material controls rate of delivery of the drug substance.

128. (canceled)

129. (previously presented) An implantable ocular drug delivery device comprising:

a coil-shaped body member comprising a tube provided in a coil shape that is implanted within the vitreous fluid of a patient eye to deliver a drug substance to the patient via the body member; and

a cap element sized to provide a cross-section larger than the cross-section of the coil-shaped body member, the cap element being in contact with the coil-shaped body member;

wherein the device is insertable through an incision approximately the same size as the outer diameter of the tube forming the body member.

130. (canceled)

131. (canceled)

132. (previously presented) The device of claim 129, wherein at least a portion of the body member comprises a biodegradable polymer.

133. (previously presented) The device of claim 132, wherein the biodegradable polymer contains microparticles of the drug substance, wherein as the polymer degrades, the drug substance is released.

134. (previously presented) The device of claim 132, wherein the biodegradable polymer is selected from polyesters of molecular weight of 4,000 to 100,000, homopolymers and copolymers of polylactic acid and polyglycolic acid, polycaprolactone, homopolymers and copolymers of polyanhydrides, homopolymers and copolymers of dicarboxylic acids, polymeric fatty acid dimer compounds, poly(alky-2-cyanoacrylate), poly(hexyl-2-cyanoacrylate), collagen (gelatin), polyacetals, divinyloxyalkylenes, polydihydropyrans, polyphosphazenes, homopolymers and copolymers of amino acids, polydioxinones, polyalkylcyano acetates, polysaccharides and their derivatives, and cellulose and hydroxymethyl cellulose.

135. (previously presented) The device of claim 132, wherein the biodegradable polymer comprises one or more of terephthalic acid anhydride, bis(p-anhydride), poly(p-carboxyphenoxy) alkyl, sebacic acid, adipic acid, oxalic acid, phthalic acid, maleic acid, polydodecanedioic acid polyorthoesters, copolymers of leucine and methyl glutamate, dextran, or cyclodextran.

136. (previously presented) The device of claim 68, 79, 111, 116, or 129, wherein at least a portion of the device comprises a material that is permeable or semi-permeable to the drug substance.

137. (previously presented) The device of claim 136, wherein the portion of the device that comprises a permeable or semi-permeable material represents a percentage of the overall body member material, and wherein the percentage of body member material composed of permeable or semi-permeable material controls rate of delivery of the drug substance.

138. (previously presented) The device of claim 68, 111, or 129 wherein the tube has a circular cross-section.

139. (new) The device of claim 111 wherein the tube has a cross-section of 0.5 mm or less in diameter.

140. (new) The device of claim 139 wherein the tube has a circular cross-section in the range of 0.25 to 0.5 mm in diameter.